Developing a Prioritization Protocol for Munitions Response Sites

Presentation to the National Congress of American Indians

November 13, 2002

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Congressional Requirement

- Section 311 of FY02 Defense Authorization Act
  - Develop, in consultation with States and Indian Tribes, a proposed protocol for assigning to each “defense site” a relative priority for response activities related to unexploded ordnance, discarded military munitions, and munitions constituents
    - “Defense sites” are locations not on an operational range where a munitions response is needed
  - Issue proposed protocol for public comment by November 30, 2002
  - Issue final protocol
  - Apply to sites in munitions response site inventories

Factors for Consideration

- In assigning a relative priority to a site, DoD is to, "primarily consider factors relating to safety and environmental hazard potential," such as* :
  - Presence of known or suspected unexploded ordnance, discarded military munitions, or munitions constituents
  - Types of munitions or munitions constituents
  - Presence/effectiveness of public access controls
  - Potential/evidence of direct human contact
  - Status of any response actions
  - Date for transfer from military control
  - Extent of documented incidents
  - Potential for drinking water contamination or release into the air
  - Potential for damage to natural resources

*Factors are paraprhrased for brevity.

DoD Objectives

- Develop, in consultation with EPA, States, and Indian Tribes, a prioritization protocol for activities at munitions response sites
  - The protocol should:
    - Use consistent factors, terminology and definitions
    - Address safety, environmental hazards, and other pertinent management factors
    - Allow for consistent application
  - Provide a proposed prioritization protocol for public comment by November 30, 2002
- Develop and provide training on the final protocol
- Apply to munitions-response sites in the initial inventory required by May 31, 2003

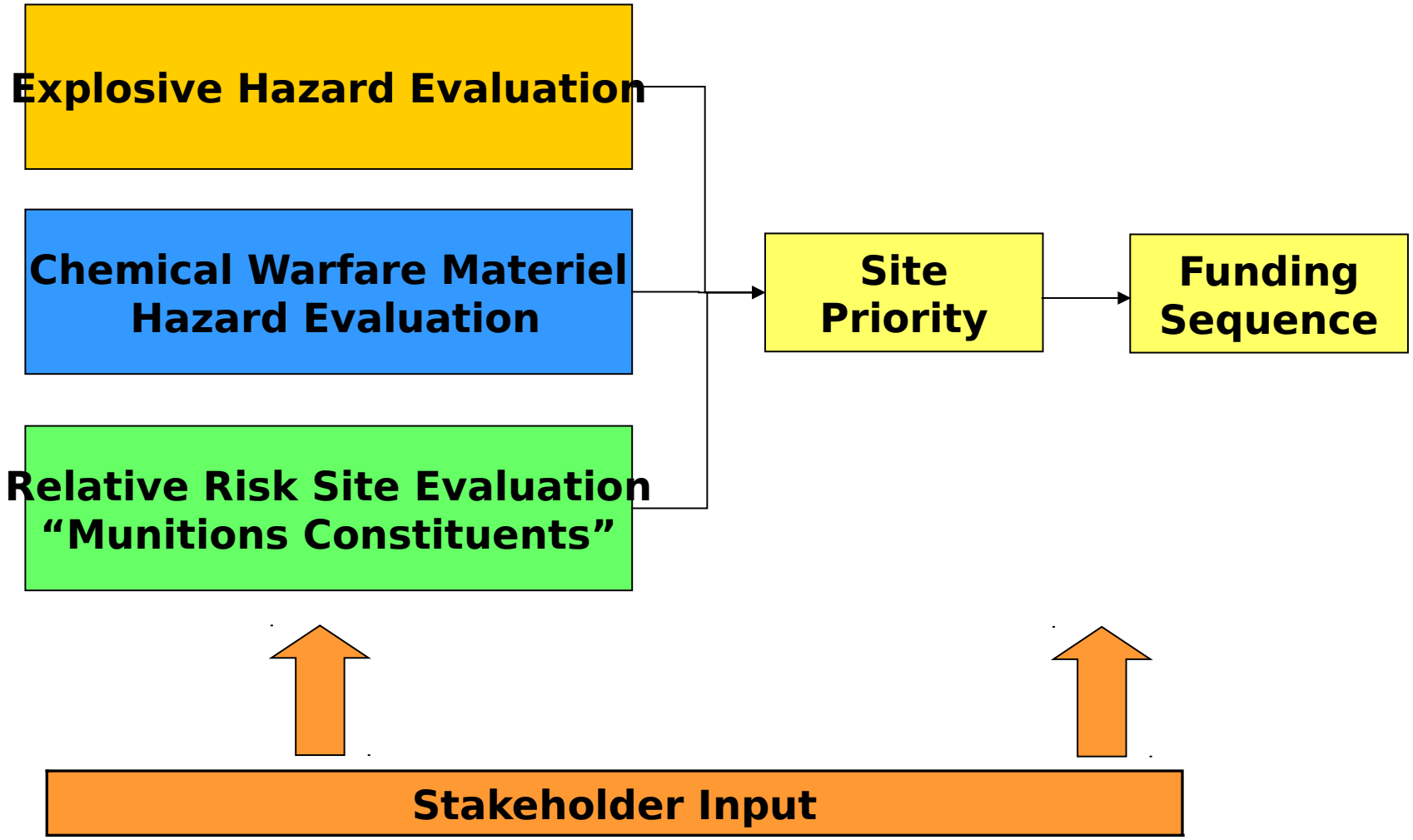
DoD/Tribal Consultation to Date

- April 2002 letter to each tribal leader of the 586 federally-recognized tribes notifying them of MMRP protocol effort
- Presentation at June 2002, 6th National Tribal Conference on Environmental Management in Reno, Nevada
- Provide information at annual meeting of the Native American Lands Environmental Mitigation Program, November 19-21, 2002

DoD/Tribal Consultation to Date

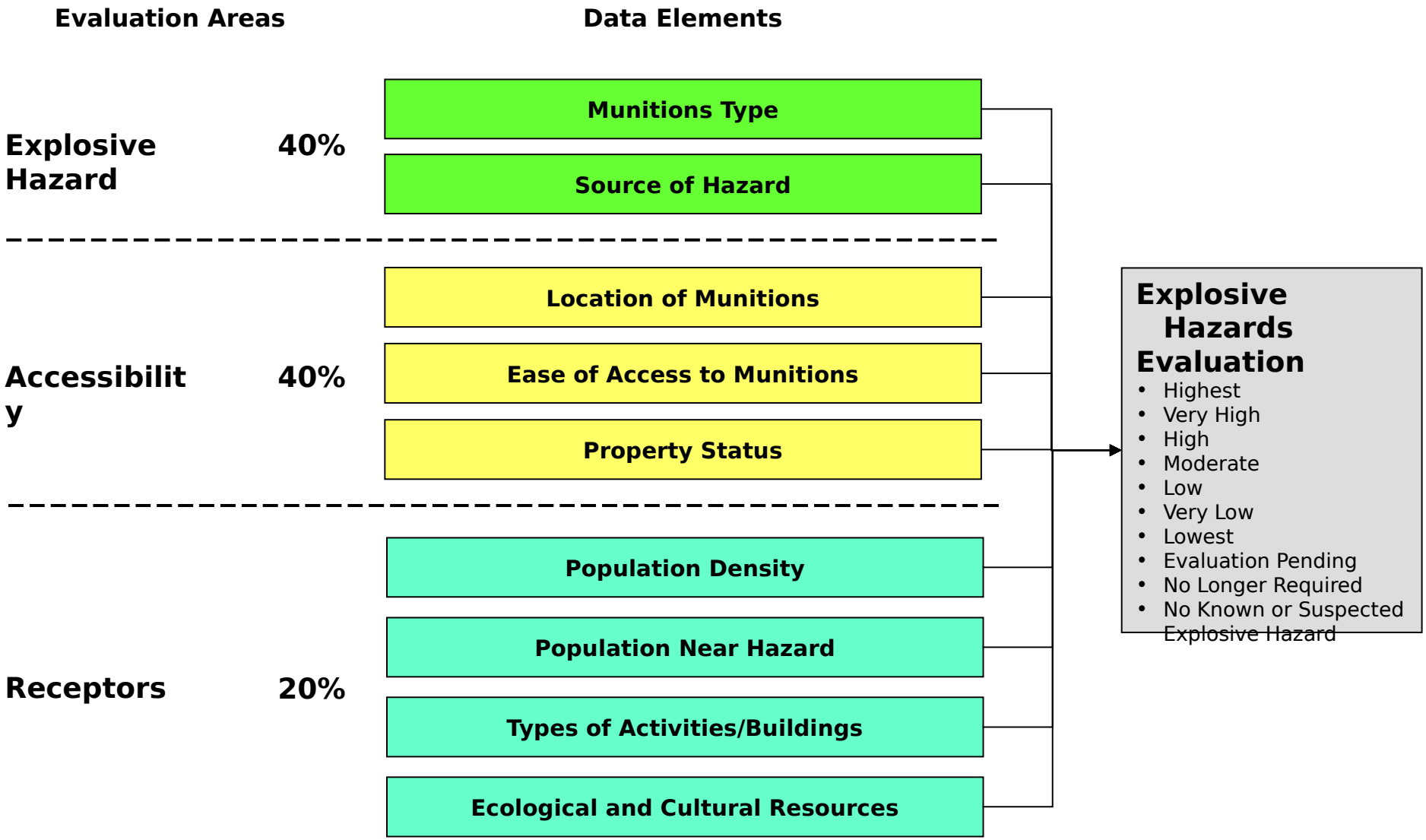
- **September 18-19, 2002, in Albuquerque, New Mexico**
  - **36 Tribes with potential munitions and NCAI invited**
  - **Representatives from 11 Tribes participated**
  - **Discussion was open and informative**
  - **Insights and knowledge helped DoD to better understand tribal concerns**
  - **Tribal participants raised the following issues:**
    - **Congressional deadline too short; Tribes will seek extension**
    - **Separate ecological and cultural resources evaluation**
    - **Consider subsistence issues in prioritization**
    - **Add a category under Property Status for Trust lands**
    - **Modify RRSE framework to address tribal-specific concerns**
    - **Contracting opportunities for Tribes**
    - **Request review and comment by tribal risk assessment expert**
    - **DoD should attend NCAI**

Overall Protocol Structure



Explosive Hazard Evaluation Module

Explosive Hazard Evaluation (EHE)



Explosive Hazard Evaluation (EHE)

Explosive Hazard

Munitions Type 30

• Sensitive	30
• High explosive (used/treated)	25
• Pyrotechnic	20
• High explosives (unused)	15
• Propellant	15
• Bulk HE, pyrotechnics, or propellant	10
• Practice	5
• Riot control	3
• Small arms	1
• Evidence of no munitions	0

Source of Hazard 10

• Former ranges	10
• Former OB/OD units	7
• Former ranges (practice munitions only)	6
• Burial pits	5
• Sites w/former industrial operating facilities	
• Firing points	4
• Former missile or ADA emplacements	2
• Former storage or transfer sites	2
• Former small arms range	0
• Evidence of no munitions	0

Accessibility

Location of Munitions 25

• Confirmed Surface	25
• Confirmed Subsurface, active	20
• Confirmed Subsurface, stable	15
• Suspected (physical evidence)	10
• Suspected (historical evidence)	5
• Subsurface, physical constraint	2
• Small arms (regardless of location)	
• Evidence of no munitions	0

Ease of Access 10

• No barrier	10
• Barrier is incomplete	8
• Barrier (no guard); or guard (no barrier)	6
• Isolated site	4
• Guard and barrier	2
• 24-hour surveillance	0

Status of Property 5

• Non-DoD control	5
• Scheduled for transfer from DoD control	3
• DoD control	0

1

Explosive Hazard Evaluation

Total Score from all elements

• Highest	>92
• Very High	82 - 91
• High	71 - 81
• Moderate	60 - 70
• Low	48 - 59
• Very Low	38 - 48
• Lowest	0 - 37

- Evaluation Pending
- No Longer Required
- No Known or Suspected Explosive Hazard

Receptors

Population Density (people/sq mi) 5

• > 500	5
• 100 - 500	3
• < 100	1

Population near Hazard 5

• 26 or more buildings	5
• 16 to 25	4
• 11 to 15	3
• 6 to 10	2
• 1 to 5	1
• 0	0

Types of Activities/Buildings 5

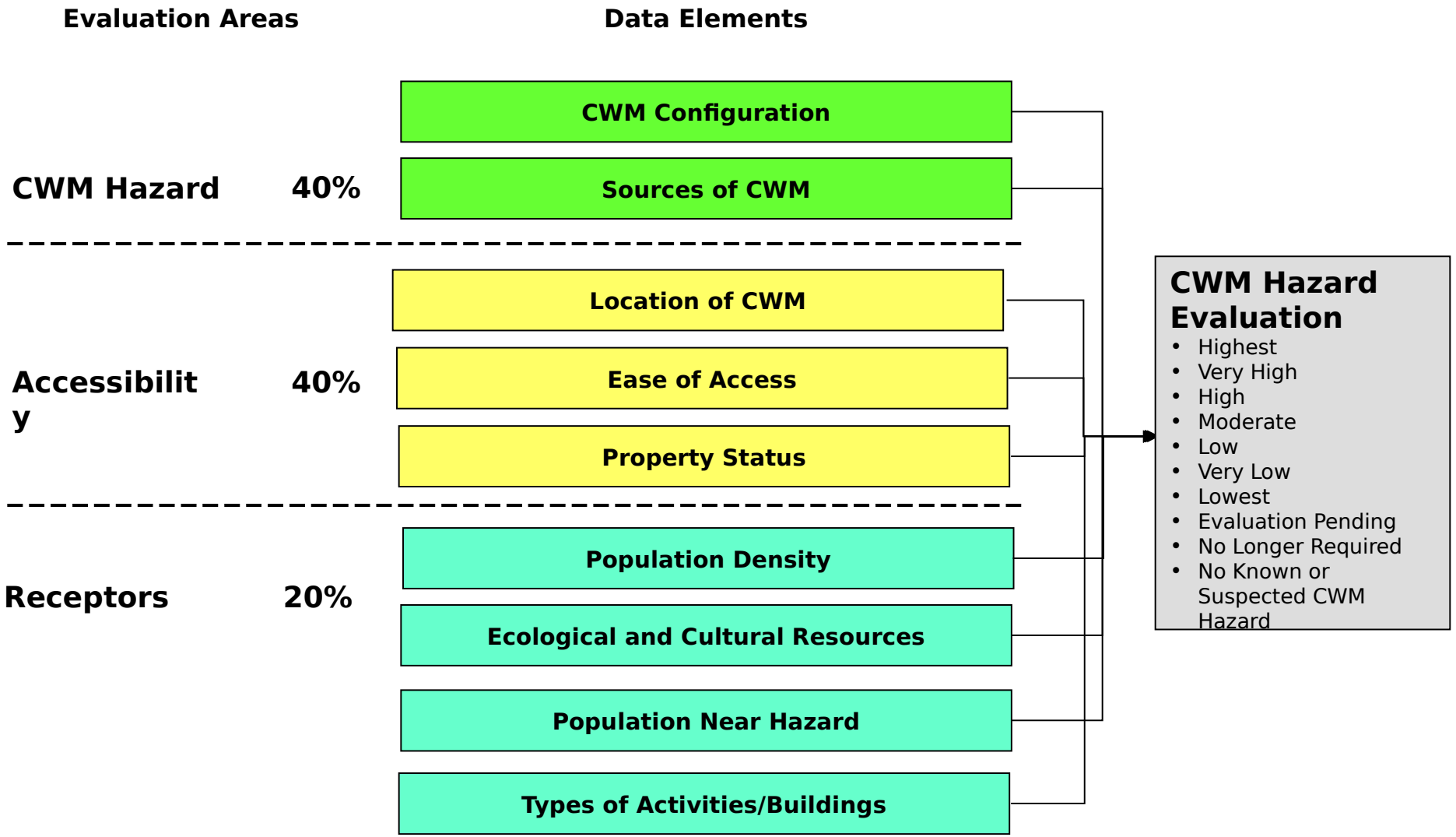
• Residential, educational, etc.	5
• Industrial, warehouse, etc.	4
• Agricultural, forestry, subsistence	3
• Recreation (hiking, hunting, etc.)	2
• No known or recurring activities	

Ecological or Cultural Resources 5

• Ecological and Cultural	5
• Ecological	3
• Cultural	3
• None	0

Chemical Warfare Materiel Hazard Evaluation Module

CWM Hazard Evaluation (CHE)



CWM Hazard Evaluation (CHE)

CWM Hazard Evaluation

Total Score from all elements

CWM Hazard

CWM Configuration 30

- Chemical, explosive configuration (used or damaged) 30
- CWM mixed with UXO 25
- Chemical, explosive configuration (unused) 20
- Bulk CWM (containerized or in non-explosively configured munition) 15
- ~~CAIS (chemical agent identification sets)~~ 5
- Evic… 0

Sources of CWM 10

Live-fire with agent filler	10
Burial site unused and damaged	10
Discarded or abandoned items, surface	10
Burial site unused	5
Production facility	3
RDT&E (includes research facilities, static testing)	2
Individual soldier training (includes liquid agent training, decontamination training)	2
Storage of CWM	1
Transfer operations	1
Evidence of no CWM	0

- Highest >92
- Very High 82 - 91
- High 71 - 81
- Moderate 60 - 70
- Low 48 - 59
- Very Low 38 - 48
- Lowest 0 - 37

Accessibility

Location of CWM 25

Confirmed Surface	25
Confirmed Subsurface, active	20
Confirmed Subsurface, stable	15
Suspected (physical evidence)	10
Suspected (historical evidence)	5
Subsurface, physical constraint	2
Evidence of no CWM	0

Ease of Access 10

No barrier	10
Barrier is incomplete	8
Barrier (no guard); or guard (no barrier)	6
Isolated site	4
Guard and barrier	2
24-hour surveillance	0

Status of Property 5

Non-DoD control	5
Scheduled for transfer from DoD control	3
DoD control	0

Receptors

Population Density (people/sq mi) 5

> 500	5
100 - 500	3
< 100	1

Population near Hazard 5

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Types of Activities/Buildings 5

Residential, educational, etc.	5
Industrial, warehouse, etc.	4
Agricultural, forestry, subsistence	3
Recreation (hiking, hunting, etc.)	2
No known or recurring activities	1

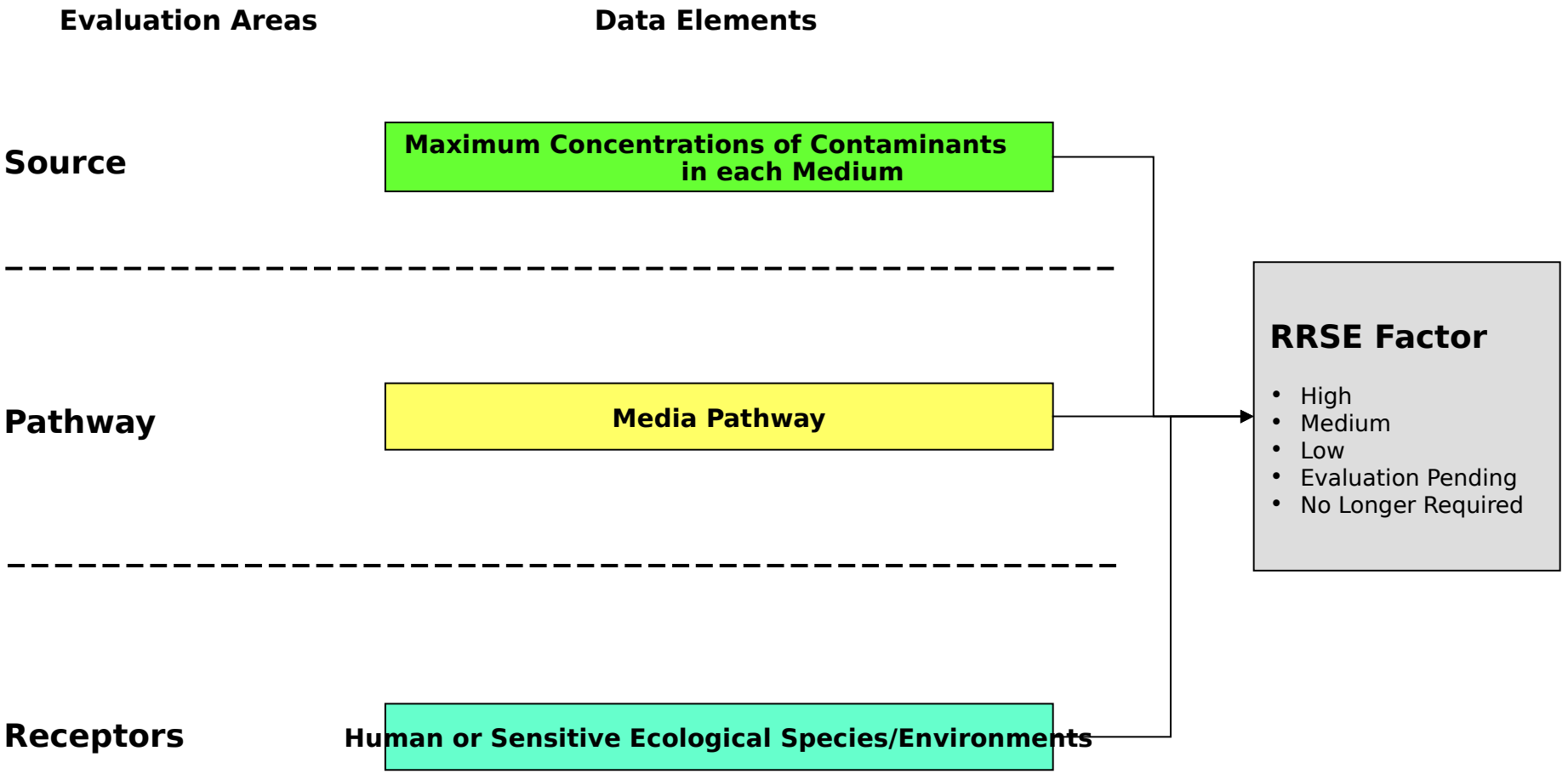
Ecological or Cultural Resources 5

- Evaluation Pending
- No Longer Required
- Unknown or Suspected CWM Hazard

Ecological and Cultural	5
Ecological	3
Cultural	3
None	0

Relative Risk Site Evaluation Module

Relative Risk Site Evaluation (RRSE)



Overall RRSE Evaluation

Concentration of Contaminant

- Significant: CHF > 100
- Moderate: 2 - 100
- Minimal: CHF < 2

Media Pathway

- Evident
- Potential
- Confined

Human or Sensitive Ecological Species/ Environments

- Identified
- Potential
- Limited

Overall RRSE Factor

Contaminant Hazard Factor		Receptor Factor	Migration Pathway Factor: Evident	Migration Pathway Factor: Potential	Migration Pathway Factor: Confined
	Significant	Identified	High	High	Medium
		Potential	High	High	Medium
		Limited	Medium	Medium	Low
	Moderate	Identified	High	High	Low
		Potential	High	Medium	Low
		Limited	Medium	Low	Low
	Minimal	Identified	High	Medium	Low
		Potential	Medium	Low	Low
		Limited	Low	Low	Low

RRSE Factor

- High
- Medium
- Low
- Evaluation Pending
- No Longer Required

Combining the EHE, CHE, and RRSE

- Reaching the Overall Hazard Priority for the Site

EHE, CHE, and RRSE Evaluations Combined

Select the Highest Priority (lowest number)

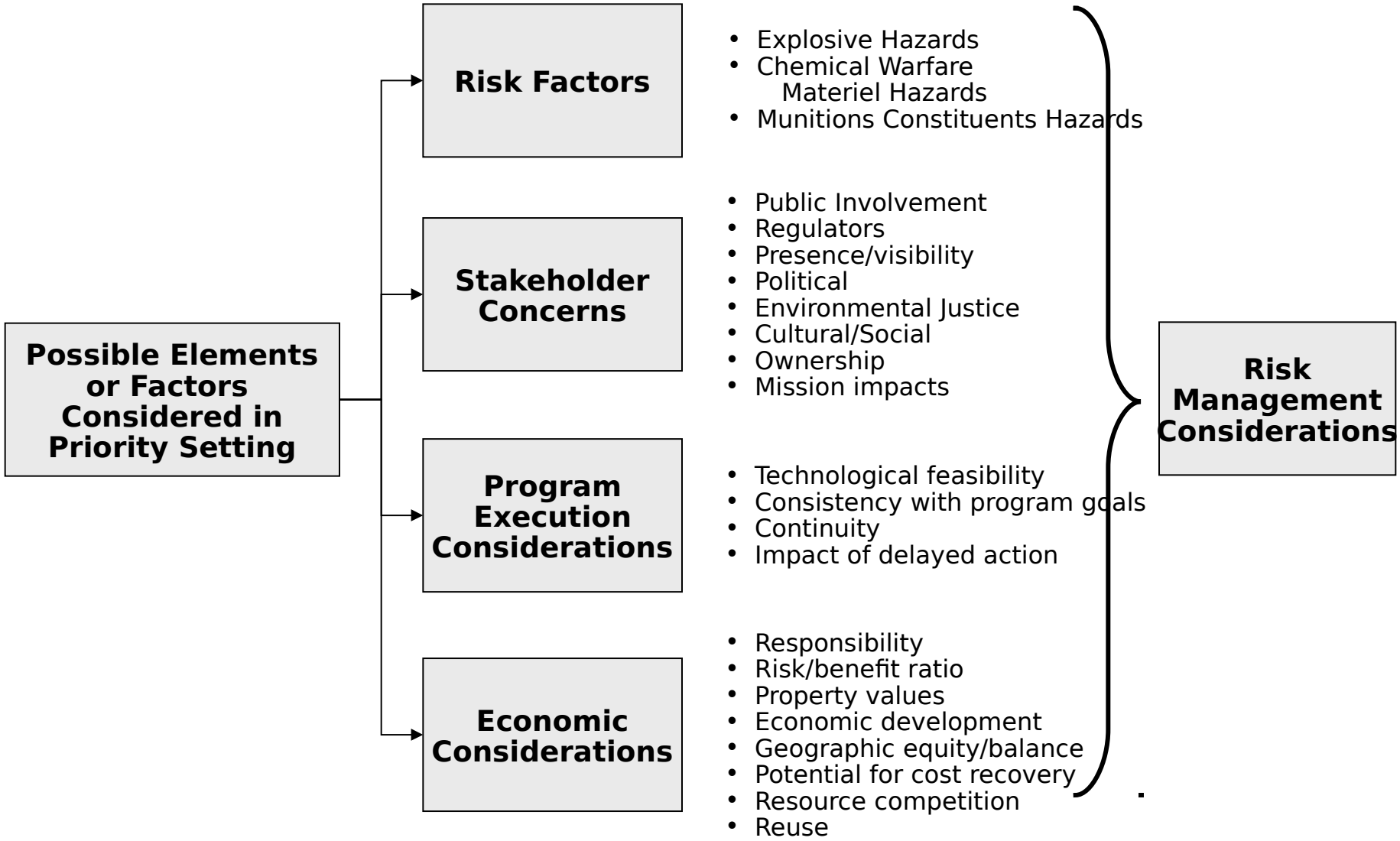
Explosive Hazard	
• Highest	2
• Very High	3
• High	4
• Medium	5
• Low	6
• Very Low	7
• Lowest	8
• No Longer Required	
• Evaluation Pending	
• No Known or Suspected Explosive Hazard	

CWM Hazard	
• Highest	1
• Very High	2
• High	3
• Medium	4
• Low	5
• Very Low	6
• Lowest	7
• No Longer Required	
• Evaluation Pending	
• No Known or Suspected CWM Hazard	

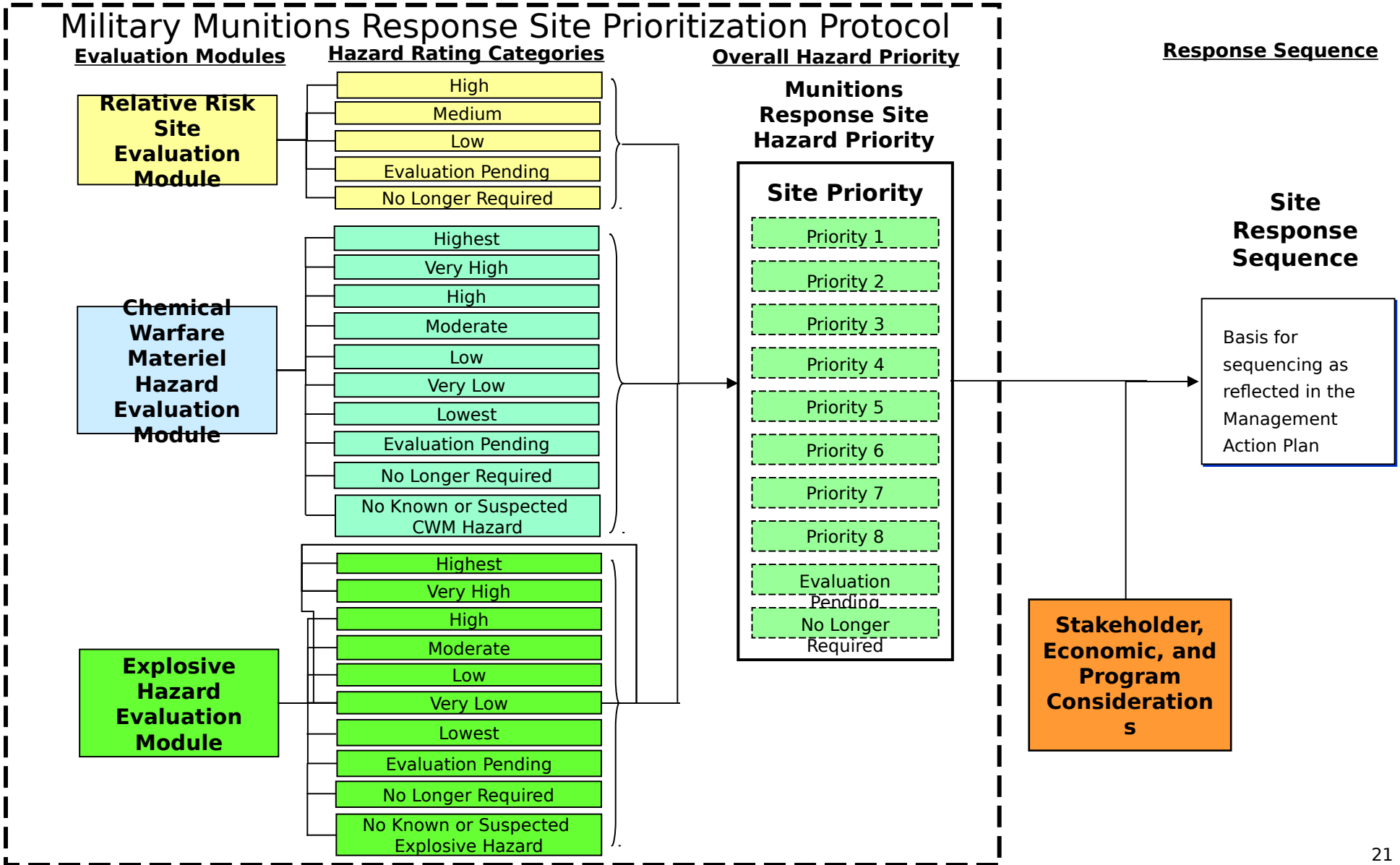
Relative Risk	
• High	2
• Medium	5
• Low	8
• No Longer Required	
• Evaluation Pending	

Other Considerations in Sequence Setting

Other Considerations' Role in Sequence Setting



Integration of Protocol with Other Stakeholder Considerations



Policy Decisions/Issues

- **Should the protocol be applied to munitions response sites and/or areas?**
- **When should the protocol be applied to sites?**
- **Can we assign a priority to a site when data are sufficient to run at least one of the three modules?**
- **Who will apply the protocol?**
- **Who should be trained on the protocol?**
- **By what date should Components complete prioritization of all sites?**
- **Under what circumstances should the protocol be reapplied?**
  - **new information is available,**
  - **area is further delineated and characterized, or**
  - **response action that has reduced hazard has been conducted**

Feedback

- **Comments, questions, concerns?**
  - **Please Contact:**

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Additional information is available at:

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